

Arinjoy Basak

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RESEARCH INTERESTS Data Mining, Big Data Analytics, Machine Learning, Natural Language Processing, Artificial Intelligence

EDUCATION **Currently a PhD student in the Department of Computer Science, Virginia Polytechnic Institute and State University, Blacksburg, Virginia**

- ☐ Expected to graduate in 2021
- ☐ Currently working on **Software Analytics** with **Dr. Francisco Servant**

Completed Bachelor of Engineering in Computer Science and Technology, Indian Institute of Engineering Science and Technology, Shibpur, West Bengal, India

- ☐ Passed in 2016, obtaining First Class with Honours.
- ☐ Final CGPA: 9.45

Completed Schooling from St. Xavier's Collegiate School, Kolkata, West Bengal, India

- ☐ ISC Examination Passed in 2012
- ☐ ICSE Examination passed in 2010

ACADEMIC QUALIFICATIONS AND SCORES

Year	Examination/Semester	Result
2016	8th Semester	SGPA: 9.88, CGPA: 9.45
2016	7th Semester	SGPA: 9.75, CGPA: 9.39
2015	6th Semester	SGPA: 9.79, CGPA: 9.34
2014	5th Semester	SGPA: 9.23, CGPA: 9.24
2014	4th Semester	SGPA: 9.08, CGPA: 9.24
2013	3rd Semester	SGPA: 9.16, CGPA: 9.29
2013	2nd Semester	SGPA: 9.68, CGPA: 9.35
2012	1st Semester	SGPA: 8.96, CGPA: 8.96
2012	ISC	Best of 4 subjects: 97.5%, Overall: 96.16%
2010	ICSE	Best of 5 subjects: 94.2%, Overall: 92%

RELEVANT SKILLS High Level Languages: C, C++, Java, Python, SchemeLISP, Prolog, Verilog HDL, VHDL
Web Technologies: HTML, CSS, JavaScript, PHP, Django
Database Frameworks: MySQL, Oracle 10g
Version Control and Documentation: L^AT_EX, Git
Big Data Technologies: Apache Hadoop, Apache Hive, Apache Spark
Hardware Exposure: Intel 8085, 8051, Atmega16 (Embedded C)
Machine Learning tools: WEKA

PUBLICATIONS **Arinjoy Basak**, Asit Kr. Das, 'A Graph Based Feature Selection Algorithm Utilizing Attribute Intercorrelation', accepted for presentation in the *The 7th IEEE Annual Information Technology, Electronics and Mobile Communication Conference (IEEE-IEMCON 2016)*, and for publication in the IEEE Xplore Digital Library.

Arpan Sen, Shrestha Ghosh, **Arinjoy Basak**, Harsh Parshuram Puria, Sushmita Ruj, 'Achieving Data Survivability and Confidentiality in Unattended Wireless Sensor Networks', accepted for presentation in *The 29th IEEE International Conference on Advanced Information Networking and Applications (AINA-2015)* and for publication in IEEE CPS Conference Proceedings.

SCIENTIFIC
RESEARCH
EXPERIENCE AND
PROJECT WORK

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| 2016 | <p>Final Year Project Work towards fulfilment of B.E. Degree</p> <p>Title: A Graph Based Feature Selection Algorithm Utilizing Attribute Intercorrelation</p> <p>Advisor: Dr. Asit Kr. Das (Assoc. Prof),
Dept. of Computer Science and Technology,
Indian Institute of Engineering Science and Technology, Shibpur</p> |
| 2015 | <p>Summer internship (9th May to 5th July, 2015)</p> <p>Title: a) Data Analytics for IITBombayX (based on OpenEdx InSight) - Detection of difficulty regions in lecture videos for students.
b) Blended MOOCs Specification and User Documentation</p> <p>Advisor: Ms. Sukla Nag (IT Project Manager)
Principal Investigator: Prof. Deepak B. Phatak
Department of Computer Science and Engineering,
Indian Institute of Technology, Bombay</p> |
| 2014 | <p>Summer internship (22nd May to 18th July, 2014)</p> <p>Title: Achieving Data Survivability and Confidentiality in Unattended Wireless Sensor Networks</p> <p>Advisor: Dr. Sushmita Ruj (Asstt. Prof)
Principal Investigator: Bimal K. Roy, Director, ISI
R. C Bose Centre for Cryptology and Security,
Indian Statistical Institute, Kolkata</p> |
| 2014 | <p>4th Semester Project Work</p> <p>Title: a) Analysis of Twitter Data using the Quick Reduct Algorithm.
b) Development of an algorithm for dynamic extraction of most relevant features from a dataset using graph based algorithms.</p> <p>Advisor: Dr. Asit Kr. Das (Assoc. Prof.),
Dr. Saptarshi Ghosh (Asstt. Prof.),
Dept. of Computer Science and Technology,
Indian Institute of Engineering Science and Technology, Shibpur</p> |
| 2013 | <p>3rd Semester Project Work</p> <p>Title: Study of Rough Set theory and implementation of the Quick Reduct Extraction Algorithm using Rough Set theory.</p> <p>Advisor: Dr. Asit Kr. Das (Assoc. Prof.),
Dept. of Computer Science and Technology,
Indian Institute of Engineering Science and Technology, Shibpur</p> |
| 2013 | <p>Summer Project work</p> <p>Title: a) Simulation of Data Structures: Arrays, Linked Lists, Stacks, Queues and Basic Operations.
b) Representation of Graphs using Adjacency Matrix and Adjacency List representation, and development of algorithms for checking graph connectivity, counting circuits, determining paths, obtaining spanning trees.</p> <p>Advisor: Dr. Asit Kr. Das (Assoc. Prof.),
Dept. of Computer Science and Technology,
Indian Institute of Engineering Science and Technology, Shibpur</p> |

WORKSHOPS AND
LECTURES
ATTENDED

- Lecture Series and Hands-on Workshop on "Practical Crypto and Security Tools", under Mr. Vijay Kumar, R. C. Bose Centre for Cryptology and Security, as part of the Summer Internship Program in Cryptology, Indian Statistical Institute, Kolkata, June 2014.
- Attended workshop on Augmented Reality, conducted by Technophilia Systems, in association with Robotics and Computer Applications Institute of USA, held at Indian Institute of Technology, Bombay, on 23rd March 2014, which covered the basics of Augmented Reality using Java and Processing, and utilized the NyARToolkit library, GSVideo plugin, overlaying of 2D and 3D surfaces, markers and MetaIO SDK.
- Attended workshop on the iTouch Robotic Arm, conducted by Technophilia Systems, in association with Robotics and Computer Applications Institute of USA. This workshop was an integral part of the Indo-US Robo League 2013, which is the qualifier for Robogames, USA — World's Largest Robot Competition (Guinness Book of Records).

ACHIEVEMENTS AND
LEADERSHIP
EXPERIENCES

- Selected among 90 students to participate in the Eklavya Summer Internship Programme under Dr. D. B. Phatak, Department of Computer Science and Technology, Indian Institute of Technology, Bombay, from 9th May to 5th July, 2015. This project was supported by the MHRD National Mission on Education through ICT undertaken by the institute, and all the R&D contributions made by the students were released in open source. Was also selected Coordinator for the IITBombayX MIS System Specification activity, during May, 2015, where I worked on Use-Case specifications.
- Qualified with team as 1st Runner up in the Zonal Round, and participated in the National Round of the Indo-US Robo League 2014, in the Robotic Arm event, held on 22nd March, 2014, at IIT Bombay, during Aavriti 2014(formerly Aagomani), organised by EESA IIT Bombay, the qualifier for RoboGames, USA — World's Largest Robot Competition (Guinness Book of Records).
- Qualified for the award of the DST Inspire Scholarship - a scholarship awarded by the Department of Science and Technology, Government of India, to students in the top 1 percent in Class XII Board Examinations conducted by CISCE.
- Received the Winner's medal in 9th standard for the best essay in the 9th standard versus 10th standard English Essay Competition held in 2008 in St. Xavier's Collegiate School, Kolkata.

REFERENCES

Dr. Asit Kr. Das, Associate Professor, Dept. of Computer Science and Technology, Indian Institute of Engineering Science and Technology, Shibpur, akdas@cs.iiests.ac.in

Dr. Biplab Kr. Sikdar, Head of the Department, Dept. of Computer Science and Technology, Indian Institute of Engineering Science and Technology, Shibpur, biplab@cs.iiests.ac.in

Dr. Sushmita Ruj, Assistant Professor, Cryptology Research Group, Cryptology and Security Research Unit, Computer and System Sciences Division, Room No 921, ASU, S.N. Bose Bhavan, Indian Statistical Institute, Kolkata, sush@isical.ac.in

Ms. Sukla Nag, IT Project Manager, Department of Computer Science and Engineering, Indian Institute of Technology, Bombay, sukla80@yahoo.co.in